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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,960	02/08/2001	Vesa Lehtovirta	2380-207	5814

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EXAMINER

HARRY, ANDREW T

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 11/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/778,960

Applicant(s)

LEHTOVIRTA ET AL.

Examiner

Andrew T Harry

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-33 is/are allowed.
- 6) ☒ Claim(s) 1-20 and 34-45 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4-6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-6, 8-9, 11-20, 34-36, and 38-45 are rejected under 35 U.S.C. 102(e) as being anticipated by *Arunachalam et al.* U.S. Patent 6,631,122 (the ‘122 patent).

As pertaining to **claims 1 and 15**, the ‘122 patent teaches that in a communication system where connections are established between an external network and radio subscriber units by way of a radio access network (see ‘122, Figure 1), a method comprising:

detecting a failure in a device node (see ‘122, col. 5, lines 54-67, in ‘122 a quality of service (QoS) degradation clearly indicates that a node is failing or may have failed completely, therefore for the remainder of the action the term QoS degradation is analogous to a node failure);

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sending a message identifying the failed device to one or more other nodes (see '122, col. 8, line 53-col. 9, line 17, the radio resource manager (RRM) receives QoS reports about the nodes used in the communications); and

wherein the one or more other nodes release radio subscriber unit connections associated with the identified failed service. See '122, col. 8, line 53-col. 9, line 17, and col. 9 lines 30-37, based on the messages received by the RRM, changes are made to the communication path to improve the overall QoS for the system. If the QoS cannot be supported then the connection is dropped.

As pertaining to **claim 2-4**, the '122 method further comprises:

releasing, maintaining or initiating the one or more affected radio subscriber unit connections identified as being effected by the detected failure message. See patent '122 col. 9, lines 29-37, if the overall QoS cannot be supported because of the degradation in the QoS in one node then the connection is terminated, or not even initiated.

As pertaining to **claim 5**, the '122 patent teaches that the subscriber unit may use plural connections during a communications session. See '122, col. 3, lines 51-67, the '122 patent teaches that his system may be comprised of various communication methods, and multi-mode devices could log onto or "use" as many of these networks as they may accommodate.

As pertaining to **claim 6, 9 and 20**, the controller **205** in the '122 patent is configured to generate a list identifying the subscriber unit, using IP addresses (since it is an IP base system), affected by the detected failure and to include the list (potentially of one subscriber) in the message. See '122, col. 8, line 53-col. 9, line 17, here the QoS agent clearly communicates the failure, and the affected subscriber to the RRM to insert into the resource database.

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As pertaining to **claim 8**, the controller in the '122 patent is configured to indicate in the list whether a signaling connection associated with a subscriber unit affected by the detected failure should be released, altered or maintained (unchanged). See '122, col. 9, lines 30-37.

As pertaining to **claims 11 and 13**, in the '122 patent the control-signaling message is sent to one or more other nodes. See '122, col. 8, line 53-col. 9, line 17, the message is sent among the QoS manager, the RMM, and other nodes of the system.

As pertaining to **claims 12 and 14**, in the '122 patent the control-signaling message is sent to a core network node using an existing access network control signaling message and the subscriber unit. See '122, col. 8, line 53-col. 9, line 17, the message is sent among the QoS manager, the RMM, and other nodes of the system.

As pertaining to **claims 16-18**, the method in the '122 patent further comprises:

assigning a corresponding network IP address to devices in the node, or port in that node (board containing plural devices) (see '122, col. 4, lines 1-15, '122 teaches that the device is implemented in an IP based system, therefore everything needs to be addressed with IP addresses);

when a radio subscriber unit connection is established, sending an address for each device or port associated with the radio subscriber unit connection to one or more of the other nodes; and

wherein the message includes the network address of the failed device, and one or more nodes' connection is affected by the notification of the drop in QoS (see '122, col. 8, line 53-col. 9, line 17, the message is sent among the QoS manager, the RMM, and other nodes of the system, and the node for which the QoS has dropped must be identified).

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As pertaining to **claim 19**, in the '122 method the node is a radio network node and a mobile subscriber unit. See '122, col. 8, line 53-col. 9, line 17.

As pertaining to **claims 34 and 43**, the '122 patent describes in an access network providing communication connections between an external network and a subscriber unit, a network node communicating with one or more network nodes (see '122, Figure 1), comprising:

a controller **205** configured to perform the following tasks:

detect a failure (drop off in QoS) in the network node (see '122, col. 5, lines 54-67, in '122 a quality of service (QoS) degradation clearly indicates that a node is failing or may have failed completely, therefore for the remainder of the action the term QoS degradation is analogous to a node failure);

determine one or more subscriber unit connections affected by the detected failure; and send a message to one or more other network nodes identifying the one or more affected subscriber unit connections (see '122, col. 8, line 53-col. 9, line 17, the drop in QoS is reported to the QoS agent then to the RRM which then can use the information regarding the detected failure to assess the effect of the failure on other links in the system).

As pertaining to **claims 35-36**, the controller **205** in the '122 patent is configured to generate a list identifying the subscriber unit, using IP addresses (since it is an IP base system), affected by the detected failure and to include the list (potentially of one subscriber) in the message. See '122, col. 8, line 53-col. 9, line 17, here the QoS agent clearly communicates the failure, and the affected subscriber to the RRM to insert into the resource database.

As pertaining to **claims 38 and 44-45**, the controller in the '122 patent is configured to indicate in the list whether a signaling connection associated with a subscriber unit affected by

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the detected failure should be released, altered or maintained (unchanged). See '122, col. 9, lines 30-37.

As pertaining to **claim 39**, in the '122 method the node is a radio network node and a mobile subscriber unit. See '122, col. 8, line 53-col. 9, line 17.

As pertaining to **claims 40-41**, the node in the '122 patent contains a switch, and multiple processors on multiple boards (as with any common switch) connected to the switch, each board having multiple processors. See '122, col. 3, line 50-col. 4, line 15, clearly the nature of the network makes it inherent that the nodes are packet switching nodes and that they contain multiple processors to perform the protocol and processing needed to operate the network. The Examiner takes official notice that it would be inherent that the switched implemented in the '122 system would contain multiple processors on multiple boards in the switch.

As pertaining to **claim 42**, the network in the '122 patent is an access network. See '122 abstract.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 10, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over ‘122 as applied to claims 1, 6, 9, and 34 above, and further in view of well known prior art in the field of the invention.

As pertaining to **claims 7, 10, and 37**, the ‘122 patent includes various resource databases and system management resources to ensure the efficient operation of a communication access system. One of the tasks performed by the RRM is to actively manage all links on the system and to update and monitor the information in the Resource Configuration Database (RCD), and ensure that each subscriber has their requisite QoS. See ‘122, col. 9, lines 1-45. Therefore, the Examiner takes official notice that it would have been obvious to one of ordinary skill in the art at the time of the invention that the controller (the RRM and the RCD) would have been configured to generate a list identifying the one or more subscriber units affected by the detected failure without identifying radio subscriber unit connections, and wherein the list is used to release all subscriber unit connections associated with the one or more subscribers on the list. This would allow the RRM to disconnect subscribers from non-functional nodes and allow them to access the system using an alternative node and communications link.

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Allowable Subject Matter

Claims 21-33 are allowed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

B. Flink, et al. U.S. Patent 6,522,987 teaches a monitoring system and method implementing a percent availability test.

C. Chamberlain et al., U.S. Patent 6,643,607 teaches a monitoring system and method implementing automatic testing with a smart scanning algorithm.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Harry whose telephone number is 703-305-4749. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 703-305-4379. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

ATH

Marsha D Banks-Harold
MARSHA D. BANKS-HAROLD
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